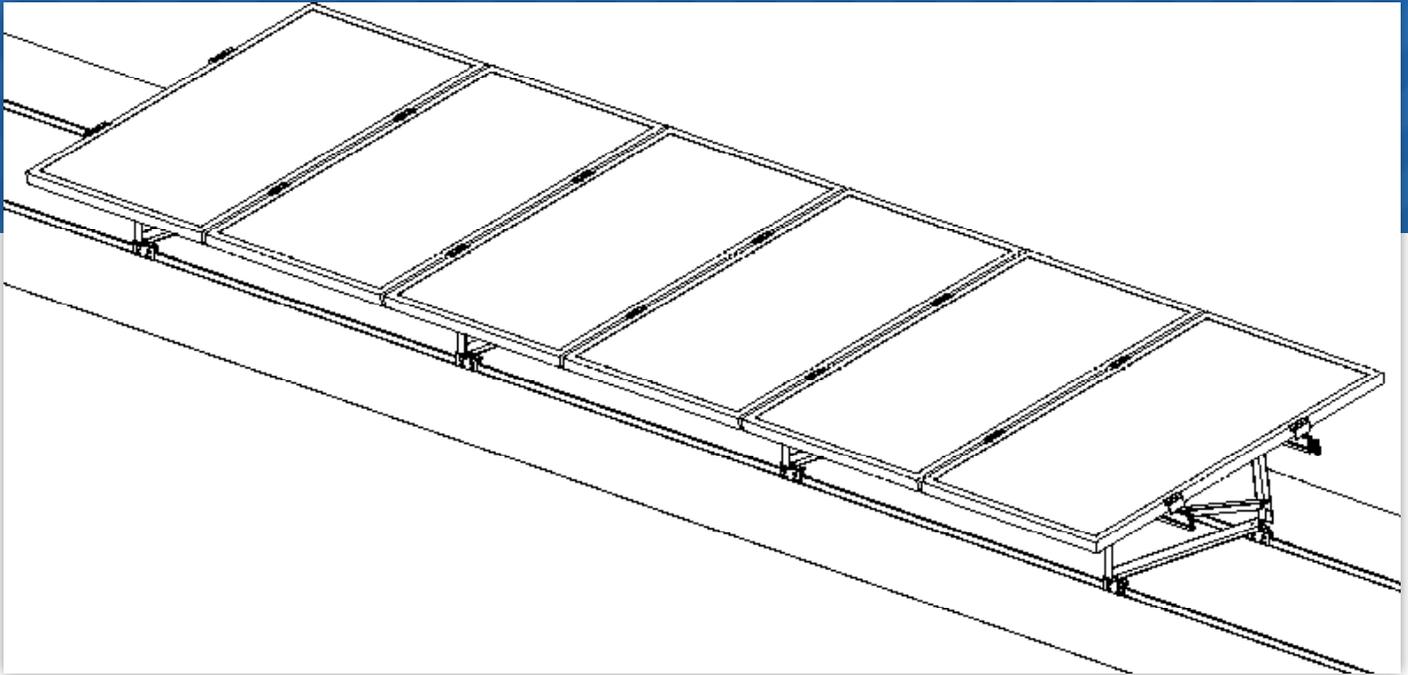




TRA SNOW & SUN
ROOF ACCESSORY SYSTEMS

Questions? Call Us!
+1 (800)-606-8980



Installation Manual **ELEVATED SOLUTION**

At TRA Snow and Sun we engineer and layout each project upon request **free** of charge. Just give us the project details and we will give you the rail spans, max loads on components, wind parameters, solar panel geometry, force per foot on rail and panels, a schematic of the module field, the wind speed, shipping weight, and project details.

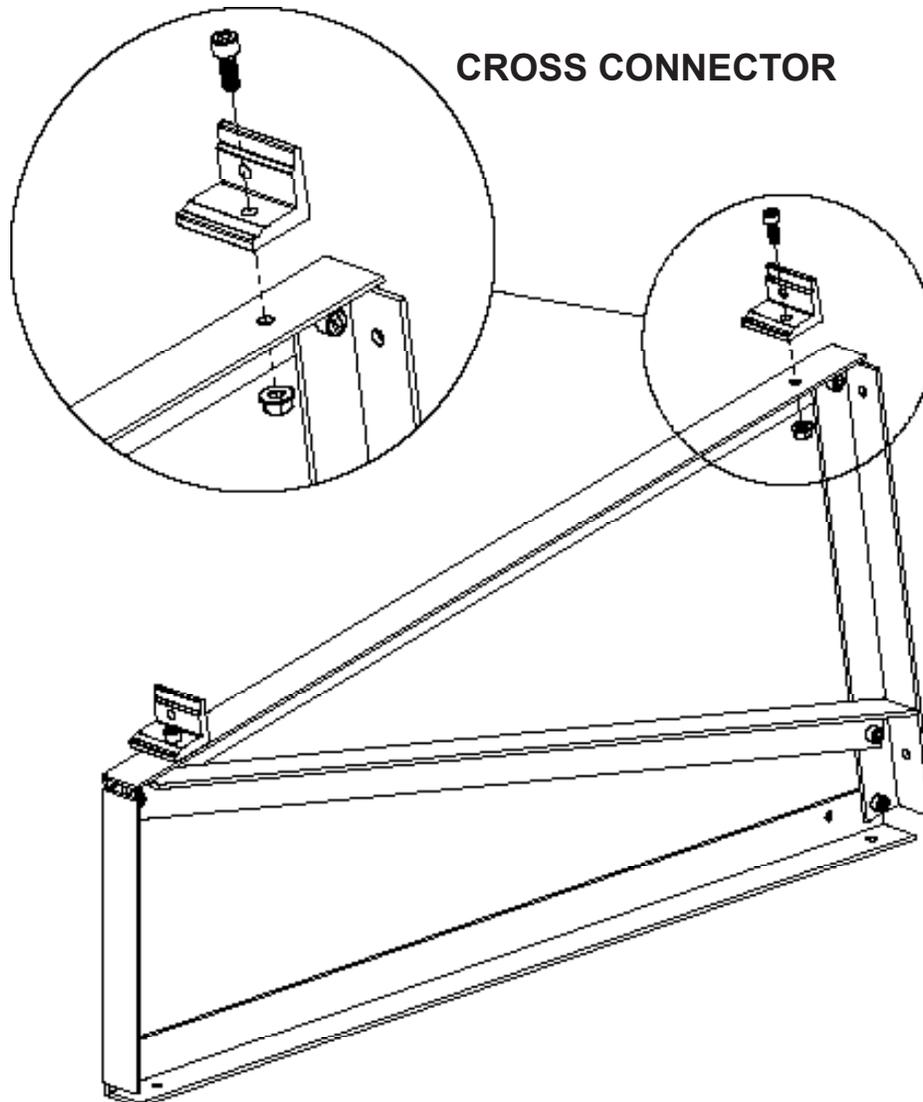


To obtain a warranted system TRA Snow and Sun must provide an engineered design. At the very minimum we strongly recommend these guidelines be followed:

STEP 1: CROSS CONNECTOR

1. Attach Cross Connector to the elevated frame using (1) M8 x 20 Bolt and (1) M8 flange lock nut.
2. Torque bolts to 15 ft. lbs.

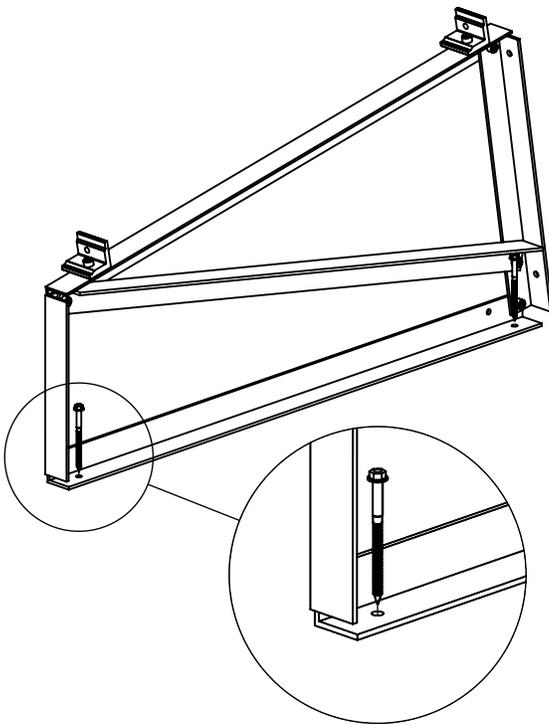
Repeat STEPS 1-2 for all Cross Connectors.



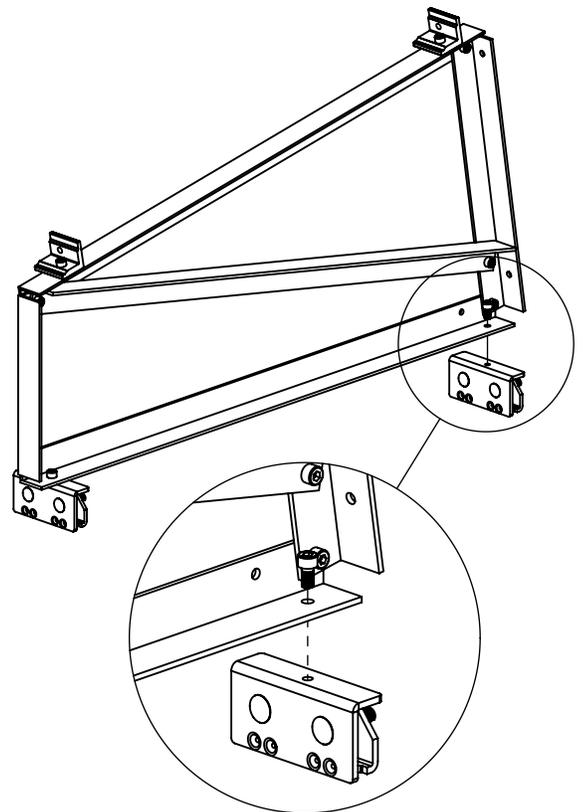
STEP 2: ROOF ATTACHMENT

1. Attach frames to standing seam clamp-ons with M8x16 bolts or lags directly into the roof structure.
 2. Torque all connections to 15 ft. lbs.
 3. Torque carriage bolts to 30 ft. lbs. when attached to the seam.
- ! Torque lags according to Manufacturer specified values.

DIRECT MOUNT



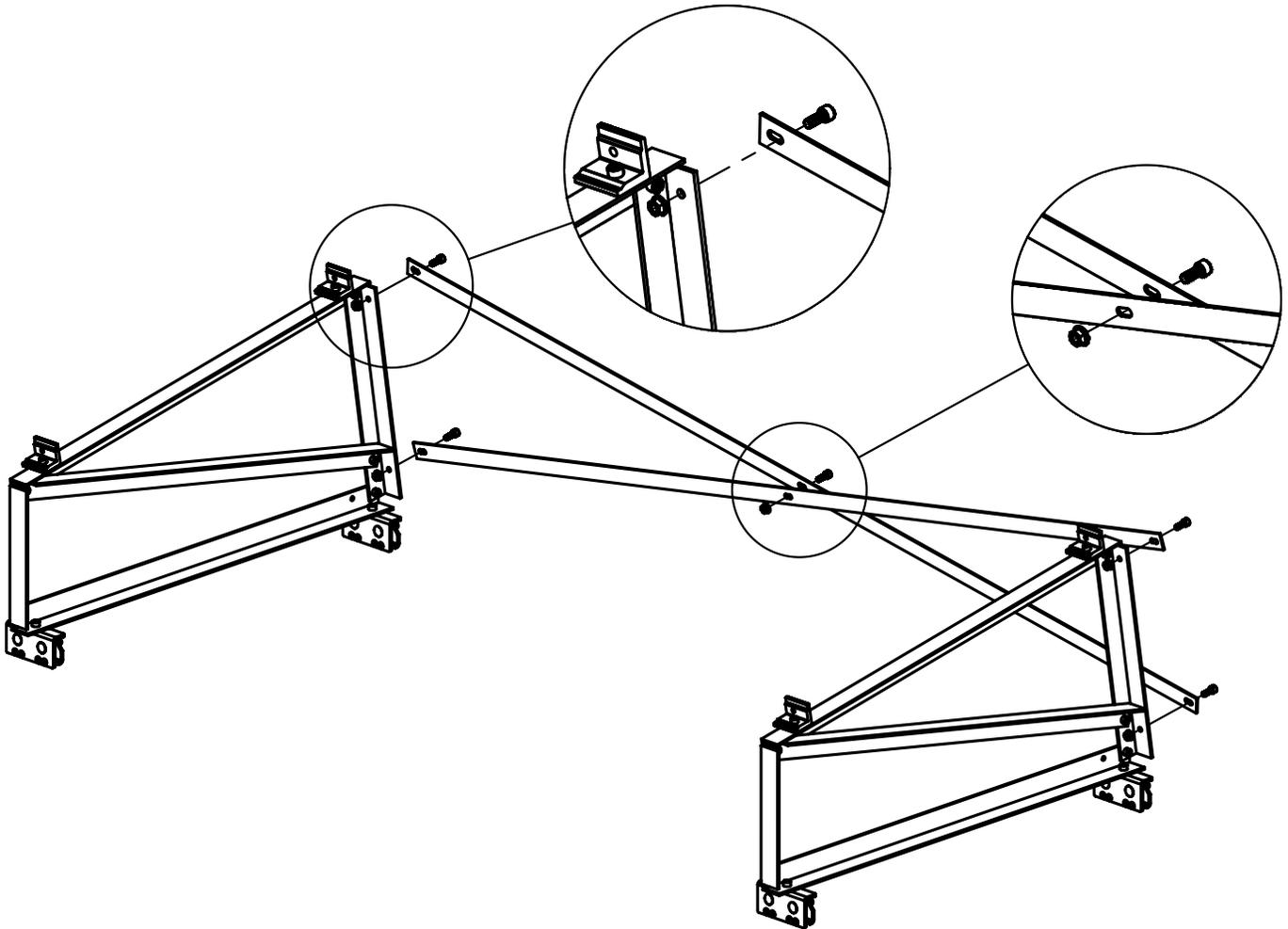
STANDING SEAM ATTACHMENT



STEP 3: CROSS BRACING

1. Attach back bracing to frames using (5) M8x20 bolts and (5) M8 flange lock nuts.
2. Torque all connections to 15 ft. lbs.

! Attach back bracing in accordance with TRA Snow and Sun Engineering drawings.

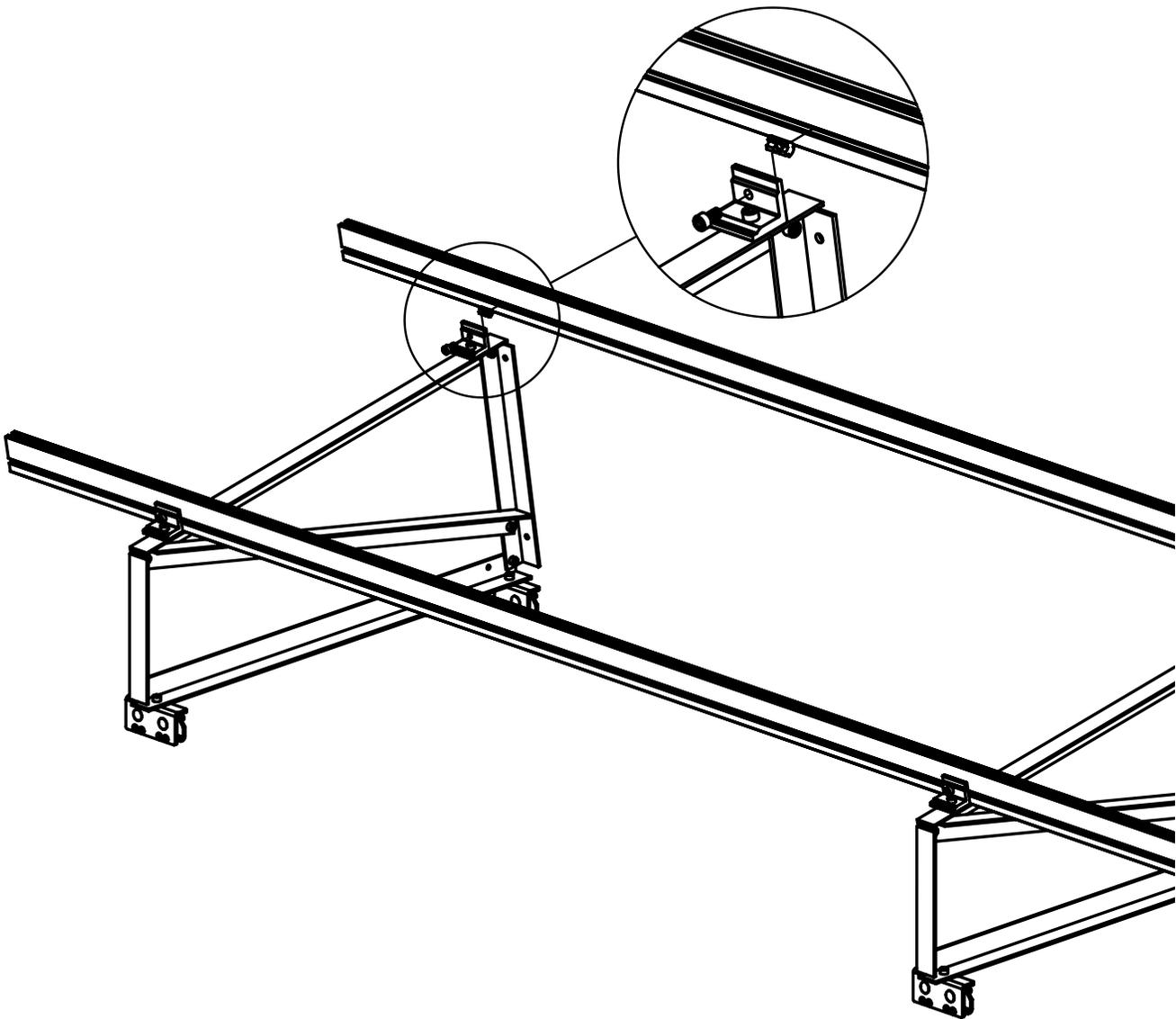


STEP 4: RAIL CONNECTIONS

1. Attach Rails to Cross Connectors using M8x20 Bolts and Sliding Blocks.
2. Torque all connections to 15 ft. lbs.

Continue assembling rails in the same manner.

Connections of Rails to Rails see STEP 5.



STEP 5: RAIL CONNECTORS- FIXED/FLEXIBLE

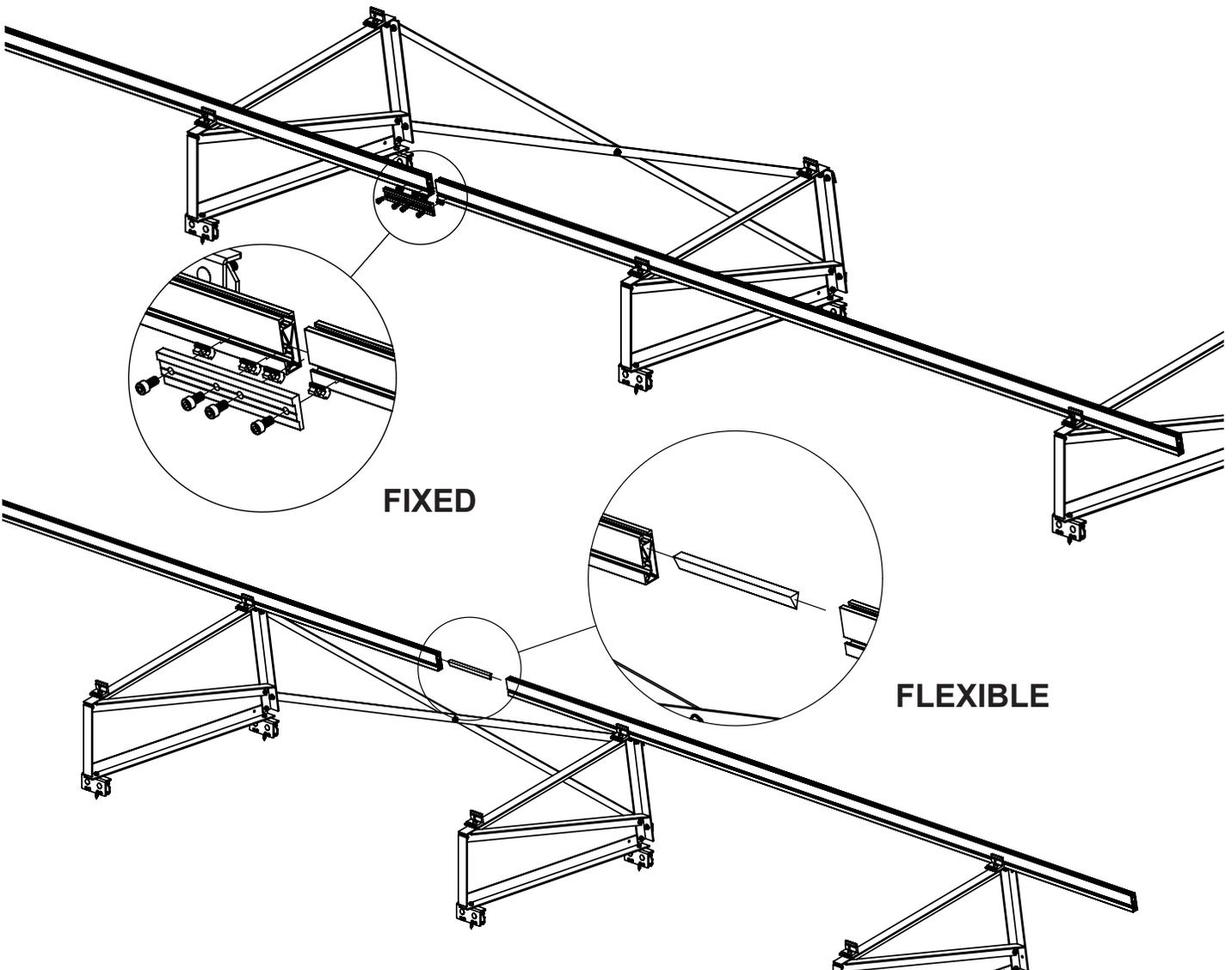
All Rail to Rail ends must be connected by a fixed connector.

1. Use (4) M8x20 bolts and sliding blocks to attach Fixed Connector.
2. Torque all connections to 15 ft. lbs.

If Rail run length has reached 50' without a break use a flexible Connector.

3. Attach Flexible Connectors by sliding one end of the Flexible Connector into End of Rail and then sliding the next Rail onto the Flexible Connector.

Repeat STEPS 1-2 for all Fixed Connectors.



STEP 6: PANEL ASSEMBLY

1. Attach Solar Panels to Rail using M8 Bolts, Sliding Blocks, Mid Clamps and End Clamps.
2. Torque all connections to 15 ft. lbs.

Repeat STEPS 1-2 for all Solar Panels.

